FOREST SERVICE MANUAL
SOUTHERN REGION (REGION 8)
ATLANTA, GA

FSM 2200 – RANGE MANAGEMENT

CHAPTER 2240 – RANGE IMPROVEMENTS

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Digest:

2240.1 – Issues authority to use native plant species for re-vegetation and restoration on National Forests in the Southern Region

2240.2 – Lists the rationale for using native plant species for re-vegetation and restoration.

2240.3 – Policy sets parameters for selecting native seeds and other plant materials to be used for re-vegetation and restoration.

2240.5 – Defines the terminology used in this policy.

2240.1 Authority

This manual direction encourages the use of native plant species for revegetation on National Forests. The use of native plants for revegetation and restoration is integral to the overall national goal of conserving the biodiversity, health, productivity, and sustainable use of forest, rangeland and aquatic ecosystems. Maintaining biodiversity includes retaining the genetic variability within plant populations (See 2240.1 – Exhibit 01). The policy provides guidance for planning and implementing revegetation projects including rehabilitation and restoration of forest, range, and aquatic ecosystems:

1. The National Forest Management Act of 1976 (Sec. 6. 90 Stat.2949) is the principal legislative mandate that directs the conservation of biological diversity.

2. Follow direction provided in 36 CFR 219.20(b)(1) and 36 CFR 219.20 (b)(2)(i).

2240.2 – Objectives

1. Conserve the native biological diversity of plant communities, species and populations.

2. Reduce adverse impact that may be caused by management activities or natural disturbances.

3. Prevent soil erosion after major disturbances, while concurrently avoiding long-term adverse effects on the composition, structure, and function of natural plant communities.

4. Control the composition and structure of plant communities by using appropriate native plant species where possible.

5. Prevent the displacement of native species and the disruption of plant communities through the introduction of aggressive, persistent, self replicating, long lasting non-native vegetation into managed or natural plant communities.

6. Move rapidly toward the general use of locally adapted native plant species.

7. Forest Service program should promote acquiring, propagating, and using native plant materials for interdisciplinary ecosystem management projects; including wildlife, riparian, watershed, road-side, emergency post-fire soil stabilization, and other revegetation, and restoration projects.

8. Stimulate development of new technologies to achieve land and resource management objectives. This includes the evaluation of alternatives that provide economical as well as practical means to restore plant communities.

2240.3 - Policy

To the extent practicable, seeds and other plant materials used in erosion control, fire rehabilitation, riparian restoration, forage enhancement and other vegetation projects shall originate from ecologically well adapted and, where practical, indigenous plant species. Native plants generally have historical value and are ecologically adapted to their local habitats. They are key factors in sustaining resilient, healthy, and productive ecosystems. The following steps outline this policy:

1. Rely upon knowledgeable plant resource specialists to develop management prescriptions to maintain and restore ecologically adapted, indigenous plant species or desirable naturalized non-indigenous species.

2. Consider natural and/or artificial regeneration alternatives including collection of ecologically adapted and or indigenous sources of plant seeds or cuttings, nursery propagation, and on-site planting and maintenance activities in projects involving revegetation and following soil disturbances such as, road construction, building construction, hiking trails, construction or maintenance and erosion control.

3. Use plant materials (seed, cuttings, and whole plants) in all revegetation projects that originate from ecologically adapted and or indigenous sources of species, to the extent practicable. These species may be native or desirable naturalized non-native species, where desirable means that the species is not an aggressive spreading type plant. Where possible, use only commercial sources of native plant materials collected within the same ecological section (National Hierarchy of Ecological Units) or geographic subdivision(s) as the project area.

a. Encourage natural (native or desirable non-native species) regeneration where seed source and soil conditions are favorable.

b. Where natural regeneration is likely to fail within the desired time frame and soil protection is necessary.

(1) Evaluate the use of non-vegetative techniques that allow natives to return, such as weed and disease free mulching.

(2) Evaluate the use of sterile or known non-persistent (annual) grasses, erosion blankets, or sterile straw waddles.

c. Alternatively, collect seed as near the site as possible within an adaptive seed-zone.

d. Sow directly to the area to be re-vegetated or grow in an appropriate nursery.

e. If an ecologically adapted or indigenous stock of native species is not available for revegetation, consider eliminating, delaying, or modifying the project by planting in stages as they become available.

f. When the project NEPA, analysis ensures the use of desirable and or ecologically adapted non-native plant materials, that analysis documents why non-natives are preferred (cf. Regional Exotic Invasive Plant Species Policy).

4. Use plant materials collected or purchased for revegetation projects (where possible and/or feasible), which have been carefully evaluated to ensure that these materials are healthy, free of pests and disease, and are properly handled, stored, and conditioned for successful use.

2240.5 - Definitions

1. Revegetation: a general term for renewing the vegetation on a project site, which may include restoration and rehabilitation.

2. Rehabilitation: Improving a project site to a more desired condition than previously existed.

3. Restoration: reestablishing a project site to a previously existing natural condition using similar or identical native vegetation.

4. Native plant: one that occurs and has evolved naturally in the Region as determined climate, soil, and biotic factors, (36CFR 219.36).

5. Genetically local source: plant materials that originated at or within the same seed zone and elevation band as the project site.

6. Non-native plant species: a plant species that was introduced through human activity.

7. Undesirable plant: may be non-native species, non-adapted source, genetically changed through selection in a foreign dissimilar environment, or possesses trait(s) that conflict with accomplishment of objectives.

8. Indigenous plant species: a plant species that is existing/growing or produced native to the area, in a location.

9. Non-native species: a plant that will accomplish goals and objectives and yet not spread off site and become invasive.

2240.1 – Exhibit 01

D-Explanation.

1. Intent. This new policy is aimed at moving to the general use of locally adapted native plant species in ecosystem management. Through natural selection native (indigenous, ecologically adapted) species have become well adapted to their abiotic and biotic environments. Furthermore this policy is designed to emphasize the importance of biodiversity, and to recognize the intrinsic value of native plant vegetation as a component of natural forest and rangeland ecosystems. Non-native species, although useful at times, have great potential for disrupting natural communities. For example, non-native species may become aggressive competitors and cause the displacement of native plant species. Alternatively, non-locally adapted populations may be poorly adapted to local environments exhibiting poor survival and growth patterns and a high susceptibility to environmental extremes and endemic pests and pathogens. New insects or diseases may also be introduced into the forest ecosystems by use of non-native plant species. Polices and procedures for reforestation of conifer trees are well documented and are based on decades of research and practice. In addition, seeds are now readily available for most local sources of native conifers due to on going seed collection and storage practices. However, for other native plant species such documentation and seed availability does not generally exist.

2. Use of Non- Natives. Recognizing that the following situations exists in the east: (1) there exists over 400 years of disturbance and manipulation of native vegetation, (2) plant communities are highly altered through human manipulation in composition, structure, function, and processes. (3) Over much of the east, many dominant species of trees have been lost or highly impacted (American chestnut, Eastern hemlock, Carolina hemlock, beech, red spruce, fraser fir, butternut dogwood etc.) due to disease and insect attacks. Non-native plant species or populations of natives that are adapted to a different locale may at times be appropriate. Especially for short-term revegetation for stabilizing severely disturbed sites (e.g., wildfire areas, road construction areas and mining areas). However, selection of the proper species and genetic source for use in these situations should be carefully considered. Many commercially available stocks are persistent, invasive and also may have great potential for disrupting natural communities and processes for long periods of time. For example, kudzu was originally selectively bred for rapid establishment for use in erosion control, which made it an aggressive competitor and now causes displacement of native species.

The introduction of plant species or seed sources that are not adapted to the planting site or are not compatible with the native species may adversely affect ecosystem integrity. Non-natives or natives from non-local populations may be poorly adapted to certain locales, resulting in low survival, slow growth, and high susceptibility to environmental extremes and endemic pests. Furthermore, new insects or diseases may be unknowingly introduced into the forest ecosystems by use of non-native species or by use of native stock grown in foreign nurseries. Such events could permanently alter ecosystems. The policy is designed to prevent this occurrence.

2240.1 – Exhibit 01 – Continued

3. Constraints to Use of Natives. In certain cases, reliance on non-native species can be reduced only gradually over time. Major barriers to the use of natives may exist. Cost factors, availability of plant materials, and capability of propagating a wide variety of native plants will have to be developed through experience and research. Current budgeting constraints present a challenge because project planning, seed collection, and nursery propagation span multiple years, yet funding linked to targets involves a single year. In the short term, these limitations could lead to a decision to use alternative methods for a project. After other alternatives have been thoroughly evaluated, if use of non-natives is deemed necessary, favor non-natives with low reproductive fitness, short longevity, or self-pollination to reduce gene pollution and undesirable long- term effects on the ecosystem.